REMARKS

Claims 1-27 are pending in this application.

By this Amendment, claims 10 and 21 have been amended to more clearly claim the subject matter of the present invention.

No new matter is added by this Amendment. Support for the amendments to claims 10 and 21 is found in the original specification and the original claims. In particular, support for the amendment to claim 10 may be found on page 9 of the original specification, and support for the amendment to claim 21 may be found in the original specification at, for example, pages 28 and 31.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner Kang in the July 17, 2003 interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

I. CLAIM OBJECTION

Claim 10 was objected to because it recites a boundary surface between the first and second microstructured portions comprised of metallic material and, the Patent Office alleges, it does not appear that there is a boundary surface between the first microstructured portion and the second microstructured portion comprising a metallic material according to the specification. Applicants have amended claim 10 to recite a boundary surface between said first microstructured portion and said second microstructured portion comprising a non-metallic material. Applicants submit amended claim 10 meets the requirements of the Patent Office.

For the foregoing reasons, withdrawal of this objection is respectfully requested.

II. SPECIFICATION OBJECTION

The specification was objected to as allegedly failing to provide proper antecedent basis for the claimed subject matter. Specifically, claim 21 recites limitation "a planarizing

step of planarizing said first microstructured portion and surroundings thereof before said molding step." The Patent Office alleges that, according to the specification, a planarizing step occurs after the molding step or during the molding step.

Applicants have amended claim 21 to recite "a planarizing step of planarizing said first microstructured portion and surroundings thereof during or following said molding step."

Applicants submit that the specification provides proper antecedent basis for the subject matter of amended claim 21.

For the foregoing reason, withdrawal of this objection is respectfully requested.

III. REJECTIONS UNDER 35 U.S.C. §102(e)

Claims 1-10 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 5,862,275 (Takeuchi). The rejection is respectfully traversed.

The micromachine as defined in claim 1 includes a first microstructured portion and a second microstructured portion of a predetermined shape, at least a part of which is formed by mold transfer, the first microstructured portion connected to the second microstructured portion for driving the second microstructured portion to cause substantially all reflected incident light from a light source to travel in a direction almost perpendicular to an area between the first and second microstructured portions.

Takeuchi discloses that the light 10, which has once arrived at the surface of the displacement-transmitting section 32, is reflected by the surface of the displacement-transmitting section 32, and it behaves as scattered light 70. See col. 28, lines 27-30.

Nowhere does Takeuchi disclose or suggest a first microstructured portion for driving a second microstructured portion to cause substantially all reflected incident light from a light source to travel in a direction almost perpendicular to an area between the first and second microstructured portions. Further, because Takeuchi does not disclose a second

microstructured portion of a predetermined shape, i.e., a switching portion formed by at least mold transfer, the light 10 in Takeuchi is reflected as scattered light. Thus, the light 10 in Takeuchi cannot be substantially reflected to travel in a direction almost perpendicular to an area between the optical wave guide plate 12 and the displacement-transmitting section 32.

Thus, Takeuchi does not describe nor suggest the features as required by claim 1 and dependent claims 2-10.

For the foregoing reasons, Applicants respectfully submit that Takeuchi fails to anticipate the subject matter of claim 1. Reconsideration and withdrawal of this rejection are respectfully requested.

IV. REJECTIONS UNDER 35 U.S.C. §103(a)

Claims 11-14, 19, 22-24 and 27 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Takeuchi in view of U.S. Patent No. 6,156,243 (Kosuga). This rejection is respectfully traversed.

Claim 11 defines a method for manufacturing a micromachine, in which a first microstructured portion is operated to drive a second microstructured portion of a predetermined shape. The method defined by claim 11 comprises a step of providing a first microstructured portion; and a molding step of forming at least a part of the second microstructured portion and the first microstructured portion by mold transfer, after the first microstructured portion is provided so that substantially all reflected instant light from a light source travels in a direction almost perpendicular to an area between the first and second microstructured portions.

Takeuchi was cited as allegedly teaching a micromachine manufacturing method for manufacturing a first microstructured portion to drive a second microstructured portion. The Patent Office acknowledged that Takeuchi does not specifically teach a molding step of forming a part of the second microstructured portion. However, the Patent Office alleges that

Kosuga teaches a molding method of forming an optical element by mold transfer used in an optical interconnection for mass production and highly accurate alignment.

Applicants submit that even if one of ordinary skill in the art would have found Kosuga to have taught a molding step to form the second microstructured portion, the presently claimed invention still would not have been achieved. Specifically, nothing in Kosuga remedies the deficiencies of Takeuchi. That is, nothing in the combined teachings of Takeuchi and Kosuga would have led one of ordinary skill in the art to a method for manufacturing a micromachine including providing a first microstructured portion so that substantially all reflected incident light from the light source travels in a direction almost perpendicular to an area between the first and second microstructured portions, as required by claim 11.

Accordingly, Applicants respectfully submit that Takeuchi and Kosuga, whether taken singularly or in combination, would not have led one of ordinary skill in the art to the invention of independent claim 11, or any of dependent claims 12-14, 19, 22-24, and 27. Reconsideration and withdrawal of this rejection are thus respectfully requested.

V. ALLOWABLE SUBJECT MATTER

Applicants note with appreciation that claims 15, 16 and 18 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

VI. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-27 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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